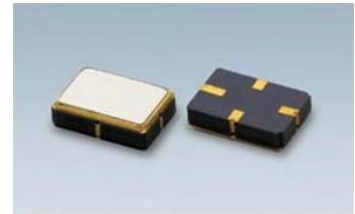


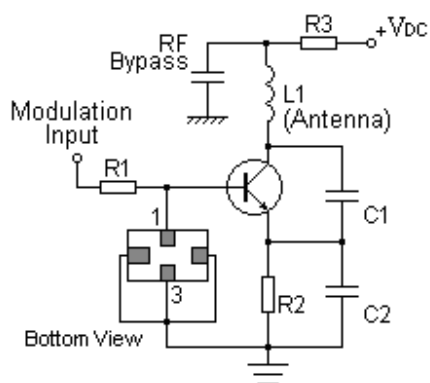
**Features**

- Ceramic Package for **Surface Mounted Technology (SMT)**
- **RoHS** compatible
- Package size 5.00x3.50x1.50mm<sup>3</sup>
- Package Code QCC4A

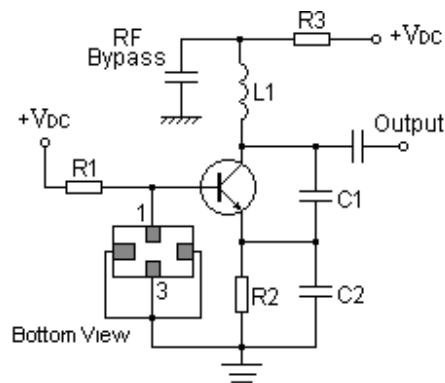


**Application**

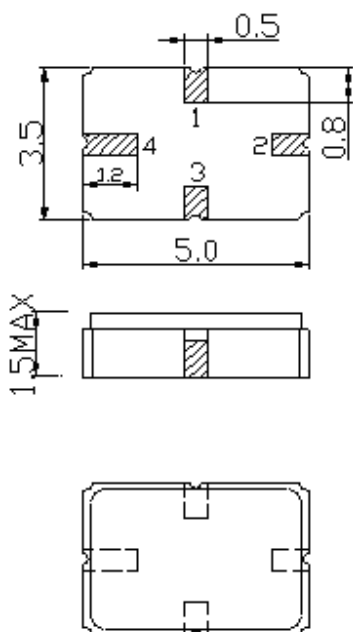
Typical Low-Power Transmitter Application



Typical Local Oscillator Application



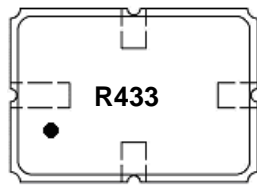
**Package Dimensions (QCC4A)**



**Pin Configuration**

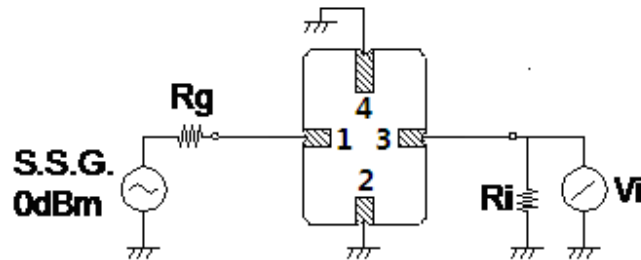
Pin No.	Description
1	Input
3	Output
2,4	Ground

Marking Description



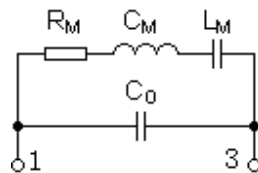
●	Pin 4
R	Manufacturer & SAW Resonator
433	Part Number

Test Circuit

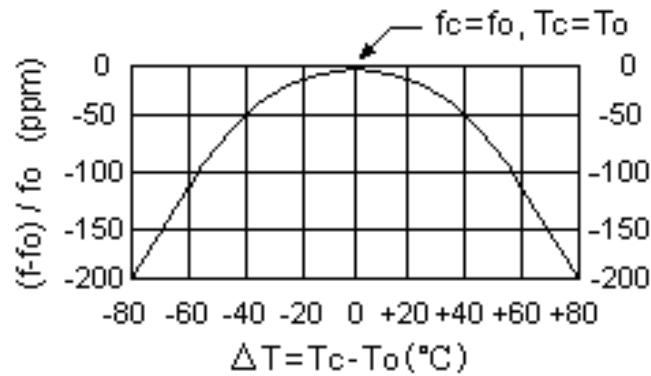


$R_g = R_i = 50\Omega$

Equivalent LC Model



Temperature Characteristics



The curve shown above accounts for resonator contribution only and does not include LC component temperature contributions.

## Performance

### Maximum Rating

Item		Value	Unit
DC Voltage	$V_{DC}$	$\pm 30$	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	$T_{stg}$	-55 ~ +125	°C
RF Power Dissipation	P	10	dBm

### Electronic Characteristics

Test Temperature:  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

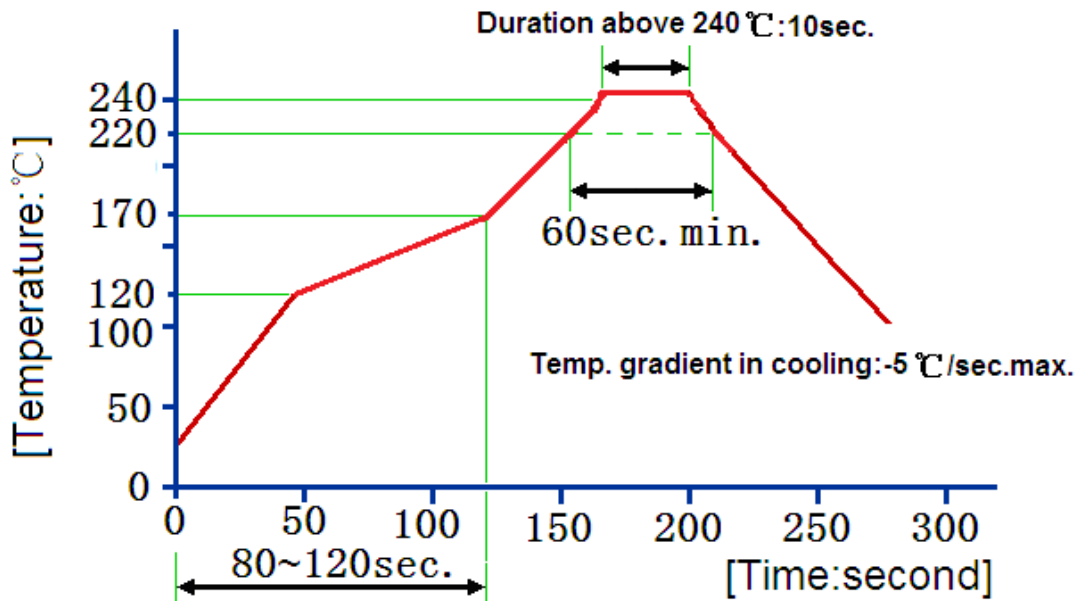
Terminating source impedance:  $50\Omega$

Terminating load impedance:  $50\Omega$

Item			Minimum	Typical	Maximum	Unit
Center Frequency	Absolute Frequency	$f_c$		433.92		MHz
	Tolerance from 433.92MHz	$\Delta f_c$		$\pm 75$		KHz
Insertion Loss(min)		IL		1.3	1.8	dB
Quality Factor	Unloaded Q	$Q_U$		15174		
	$50\Omega$ Loaded Q	$Q_L$		1771		
Temperature Stability	Turnover Temperature	$T_0$	25	40	55	°C
	Turnover Frequency	$f_0$		$f_c$		
	Frequency Temperature Coefficient	FTC		0.032		ppm/°C
Frequency Aging	Absolute Value during the First Year	$ f_A $		$\leq 10$		ppm/yr
DC Insulation Resistance between Any Two Pins			1.0			$M\Omega$
RF Equivalent RLC Model	Motional Resistance	$R_M$		13.0	22.0	$\Omega$
	Motional Inductance	$L_M$		73.6		$\mu\text{H}$
	Motional Capacitance	$C_M$		1.83		fF
	Static Capacitance	$C_0$	2.1	2.4	2.7	pF



### Recommended Reflow Soldering Diagram



Reflow cycles: 3 cycles max.

### Notes

1. As a result of the particularity of inner structure of SAW products, it is easy to be broken down by electrostatic, so we should pay attention to **ESD protect** in the test.
2. **Static voltage** between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
3. **Ultrasonic cleaning** may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
4. Only leads of component may **be soldered**. Please avoid soldering another part of component.
5. There is a close relationship between the device's performance and **matching network**. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.